

# **United Way Broward County Commission on Substance Abuse Indicators of Substance Abuse in Broward County, Florida January 1-June 30, 2002**

## **DRAFT**

Joe Spillane, Pharm.D., ABAT  
Madeline Camejo, CPh., Pharm.D.

*Cocaine use remained stable at a high level in this six month period, and the cocaine abusing population continued to age. Many of the cocaine deaths involved opioid abuse as well including methadone. Cocaine remains the most common cause of illicit substance abuse emergency department visits at Broward General Medical Center, and still the most commonly detected illicit substance at the Broward Sheriffs Office Crime Lab. There seems to have been a diversification of opioid abuse. There were about the same number of heroin and oxycodone deaths, but now we're seeing larger numbers of methadone and hydrocodone on top of the heroin and oxycodone. As a group, opioid abusers appear to be increasing, but are still predominantly white males over 30 years of age who also abuse benzodiazepines. There were no major changes regarding marijuana use in the first half of 2002, although the ED population using marijuana seem to be slightly younger. A statewide survey revealed overall downward trends in most substance abuse, however, young people in Florida seem to perceive less of a risk from the regular use of marijuana. High School seniors in Florida were almost twice as likely to have tried ecstasy as cocaine and ten times as likely to have tried ecstasy as crack cocaine. Ecstasy use continues at a relatively high level with young white abusers, although with the recent increase in amphetamine abuse other than ecstasy, it is becoming increasingly difficult to distinguish between ecstasy and other amphetamines. GHB abuse is difficult to interpret as there was a large decrease in ED visits, but there were an additional three deaths in Broward during the first half of 2002. Three of the abused substances that appear to be on the rise and bear watching in the near future are opioids-- methadone, hydrocodone, and buprenorphine. In addition, alprazolam(Xanax) remains popular with younger and older abusers, and methamphetamines other than ecstasy are also becoming more prominent.*

## **Introduction**

### **1. Area Description**

Broward County is composed of 29 municipalities and an unincorporated area. The county covers 1,197 square miles including 25 miles of coastline. According to the 2000 census, the population was 1,623,018. The population is roughly divided into 63% white, 21% black, and 17% Hispanic. South Florida is responsible for 40% of the US trade with Central America, 37% of the Caribbean, and 17% of the South American trade.

Broward County is the second most populated county in Florida, and it accounts for approximately 10% of Florida's population. Broward was the top growth county in Florida in the 1990's adding 367,000 more people. It is situated just north of Florida's most populated county, Miami-Dade, and just south of Palm Beach County, the 3rd most populous county in Florida. This geography puts Broward in the middle of the most populated area of one of the most heavily populated states in this country.

## **2. Data Sources and Time Periods:**

**Broward County Medical Examiner Department, 1999, 2000, 2001, and Jan-Jun 2002 Drug Deaths** (a review of all deaths in Broward County directly caused by or associated with drugs in 1999, 2000, 2001, and Jan-Jun 2002).

**Florida Department of Law Enforcement Medical Examiners Commission, 2001 Annual Report** -- Drug induced or related deaths in Florida 2001

**Florida Department of Law Enforcement Medical Examiners Commission, Jan-Jun 30, 2002** -- Drug induced or related deaths in Florida 1<sup>st</sup> half 2002.

**Broward General Emergency Department Drug Abuse Case Review---** a review of all drug abuse cases presenting to BGMC Emergency Department for the five time periods→(1/1/00-6/30/00, 7/1/00-12/31/00, 1/1/01-6/30/01, 7/1-12/31/01, and 1/1-6/30/02.).

**Spectrum Programs Inc.** – Broward County addiction treatment data (Jan 1-Jun 30, 2002).

**Broward Sheriff's Office Crime Lab:** reports of illicit substances analyzed 1999, 2000, 2001, and the first half of 2002.

**The Sun Sentinel:** November 13, 2002, Prescription drug deaths: Increasing overdoses alarm doctors, officials..

**The Sun Sentinel:** November 18, 2002, List released of deaths due to drug overdose.

**The Sun Sentinel:** November 15, 2002, Report: 9 million a year are on drugs while driving.

**The Sun Sentinel:** September 20, 2002. Agents hit Internet rape drug trade, 7 in South Florida among 115 arrested.

**The Sun Sentinel:** July 9, 2002. Hijackers take over truck, make off with millions in drugs.

**The Sun Sentinel:** July 14, 2002. Death by drugs: Patients who died shared physician.

**The Sun Sentinel:** November 19, 2002. Broward gets direct link to Colombia, daily air service to Bogota will start Dec 11.

**USA Today:** January 28, 2002. 'Date Rape' drug GHB making inroads in nation's club scene.

**Drug Use in Broward County: July-December 1998.** Joe Spillane and Madeline Camejo, Broward County Commission on Substance Abuse.

**Indicators of Substance Abuse in Broward County: Annual Report 1999.** Joe Spillane and Madeline Camejo, Broward County Commission on Substance Abuse.

**Indicators of Substance Abuse in Broward County: Annual Report 2000.** Joe Spillane and Madeline Camejo, Broward County Commission on Substance Abuse.

**Indicators of Substance Abuse in Broward County: Annual Report 2001.** Joe Spillane and Madeline Camejo, Broward County Commission on Substance Abuse.

**Office of Applied Studies, SAMHSA, Drug Abuse Warning Network, 2001 Update 3/02.**

***2002 Florida Youth Substance Abuse Survey, November 2002***  
*[www.myflorida.com/drugcontrol](http://www.myflorida.com/drugcontrol)*

**Epidemiologic Trends in Drug Abuse Advance Report:** December 2001. NIH Publication # 02-5108. Rockville, Md.: National Institute on Drug Abuse (2002).

Johnston,LD., O'Malley PM, & Bachman JG (2002). **Monitoring the Future national results on adolescent drug use: Overview of key findings, 2001.** (NIH Publication No. [yet to be assigned]) Bethesda MD: National Institute on Drug Abuse.

**Pulse Check: Trends in drug abuse – Nov 2001.** Office of National Drug Control Policy Publications.

**Cocaine**

Cocaine use remains at a very high level as indicated by emergency department visits, and crime lab data. Deaths appear to be down slightly but there still are many involving cocaine and an opioid. It's largely an older patient population seeking treatment in the emergency department.

## **Cocaine Deaths**

Throughout Florida, there were 180 cocaine caused fatalities in the first 6 months of 2002, this was a decrease of 8% over the previous six month period.

In Broward, during the first six months of 2002, there were a total of 30 cocaine caused fatalities, this compares with 33 in the previous 6 month period. There were 17 deaths where cocaine without heroin, or oxycodone or methadone was considered the cause of death. There were an additional 2 deaths where cocaine and heroin were considered causes of death, 6 deaths with cocaine and oxycodone as causes, and 3 other deaths where cocaine and methadone were considered causes, and an additional 2 deaths where cocaine, methadone, and oxycodone were all considered causes. Among cocaine decedents, there were 24 males and 6 females.

Twenty-five (25/30) were white, 4 were black (all four were cocaine without the opioids), and one was Hispanic (cocaine and oxycodone).. There were no teenagers, there were 5/30 decedents in their twenties. 15/30 in their thirties, 8/30 in their 40's, and 2/30 in their fifties..

In all of 2000 there were a total of 40 cocaine-caused deaths, and in all of 2001 there were 52 such deaths. It appears as though the recent increase in cocaine-deaths may be at least partly attributable to the opioid-cocaine combinations. There may be some additional cases that are still pending toxicology at this time.

## **Cocaine Emergency Department/Hospital Data**

For the first six months of 2002, a daily review of all emergency department charts at Broward General Medical Center (BGMC) was conducted to gauge illicit substance abuse related emergency department cases. 36,621 charts were reviewed, and 3.4% or 1249 cases of drug abuse were found. This was an average of approximately 7 per day. During the last half of 2001, 3.4% of all cases involved illicit substance use, averaging approximately 6 per day.

Cocaine was clearly the most commonly involved illicit drug, accounting for 641/1249 (51%) of the drug abuse cases in the first half of 2002.

Most of the BGMC patients were male 450/641 (70%), 191/641 (30%) were female. Fifty-two percent (335/641) were white, 271/641 (42%) were black, 35/641 (7%) were Hispanic/other. Cocaine using patients seeking emergency department treatment at BGMC were 30yrs of age or older in 83% of these cases, which continues a trend towards older cocaine ED patients as last year 81% and in 2000 78% were 30yrs or older. The patient ages were as follows; 19/641 (3%) were less than 20yrs old, 88/641 (14%) were in their twenties, 252/641 (39%) were in their thirties, 211/641 (33%) in their forties, and 70/641 (11%) were fifty years old or older.

The most common reasons for coming to the ED were as follows;

1. Depression/suicidal- 203/641 (37%)
2. Chest pain/cardiac problems- 64/641 (10%)

3. Psychosis/ schizophrenia/ hallucinations- 51/641 (8%)
4. Dependence/seeking detox 45/641 (7%)
5. Trauma/accidents 45/641(7%)
6. Altered Mental Status 35/641 (5%)
7. Gastrointestinal complaints 33/641 (5%).

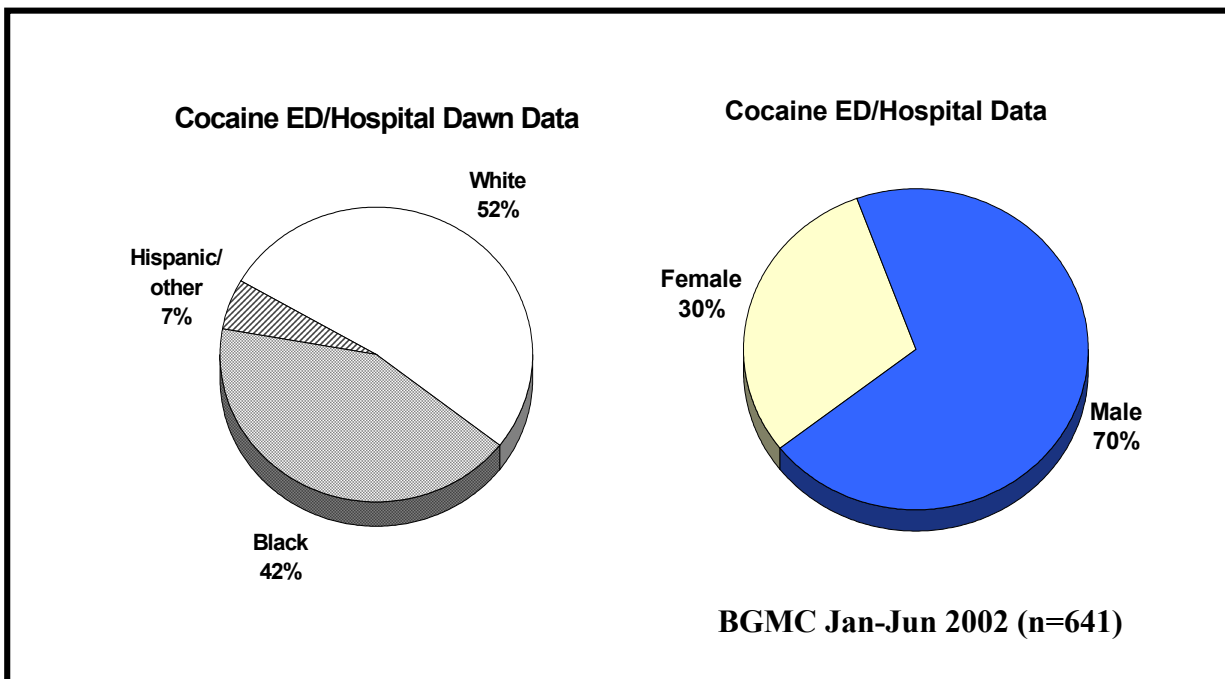
These reasons for coming to the ED were very similar to previous years

**Crack cocaine** was specifically mentioned in 185/641 (29%) of the cases in the first half of 2002, which was slightly less than the 32% in the last half of 2001 and the 31% in the first half of 2001.

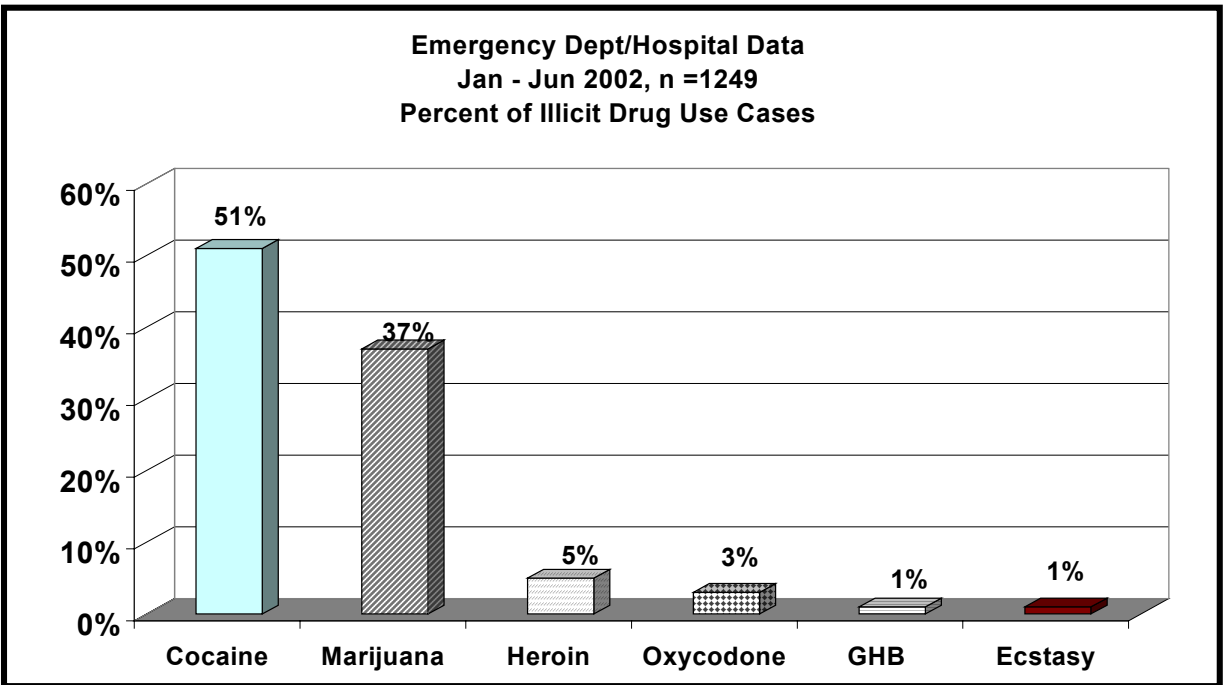
Cocaine was taken in combination with alcohol in 276/641 (43%) of the cases which was essentially the same rate as last year. This dangerous combination forms a cometabolite cocaethylene, which can dramatically increase toxicity.

Another favorite combination during the first six months of 2002 involved cocaine and marijuana. A total of 156 cases involved the combination cocaine and marijuana, which was 24%, approximately the same as 23% of all cocaine cases in the last half of 2001 and 25% in the 1<sup>st</sup> half of 2001.

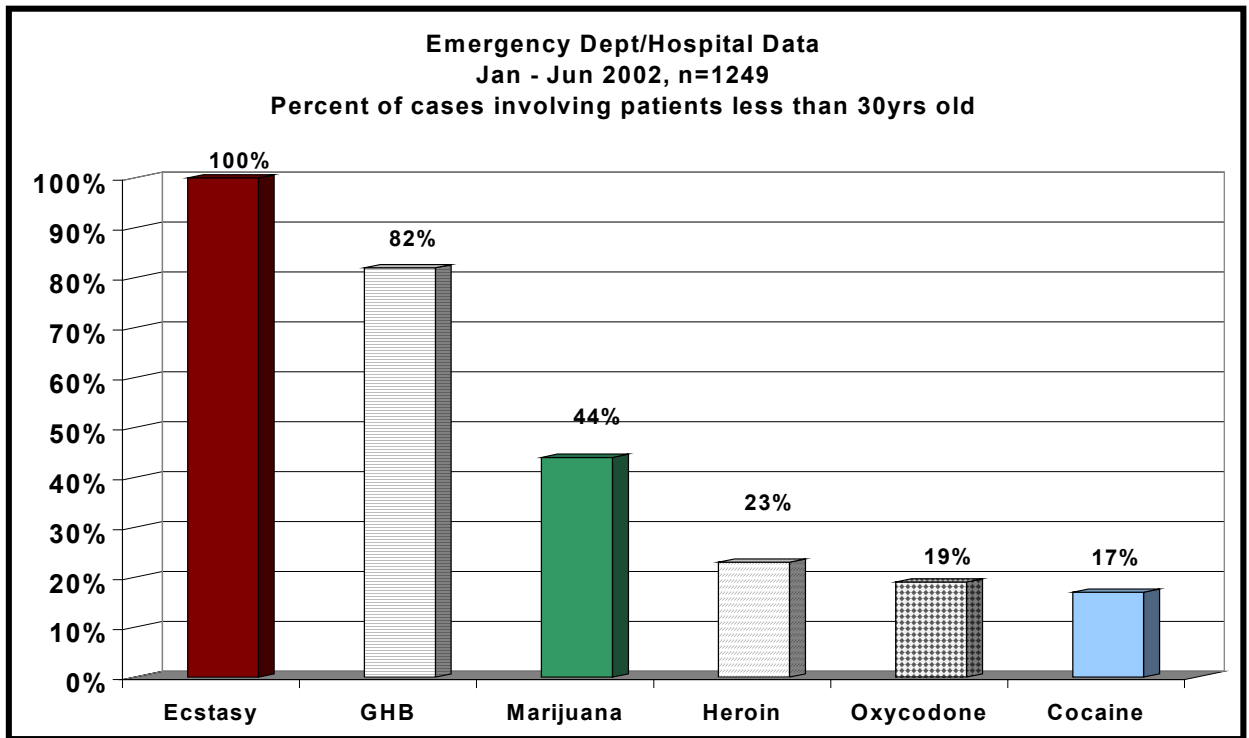
### Exhibit 1A



### Exhibit 1B

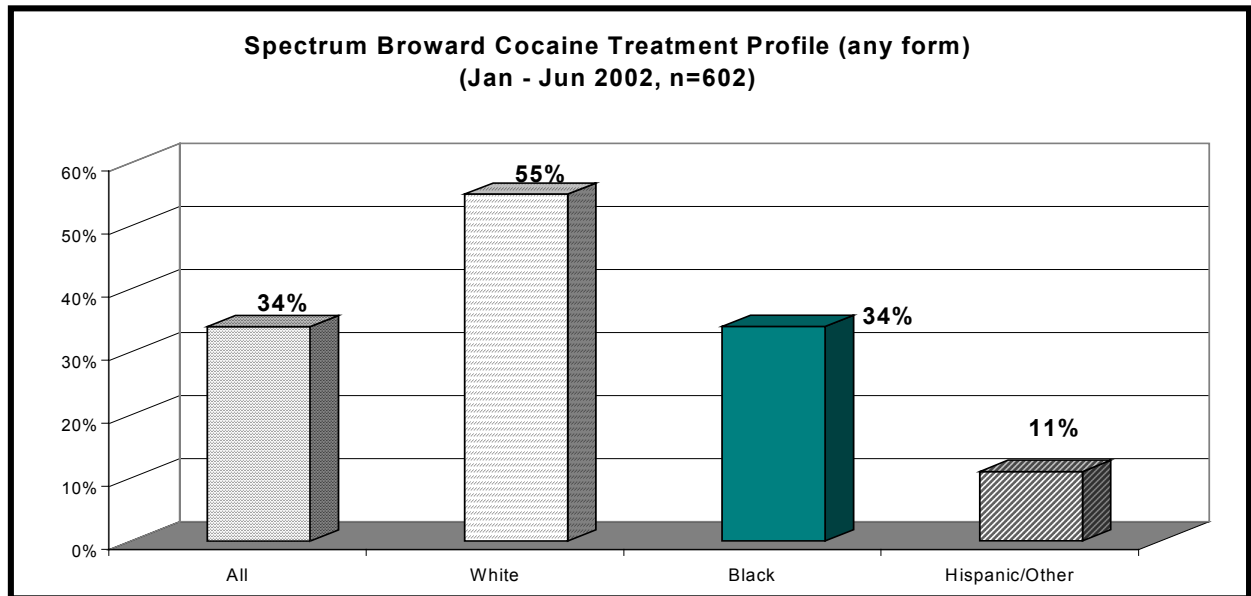


**Exhibit 1C**

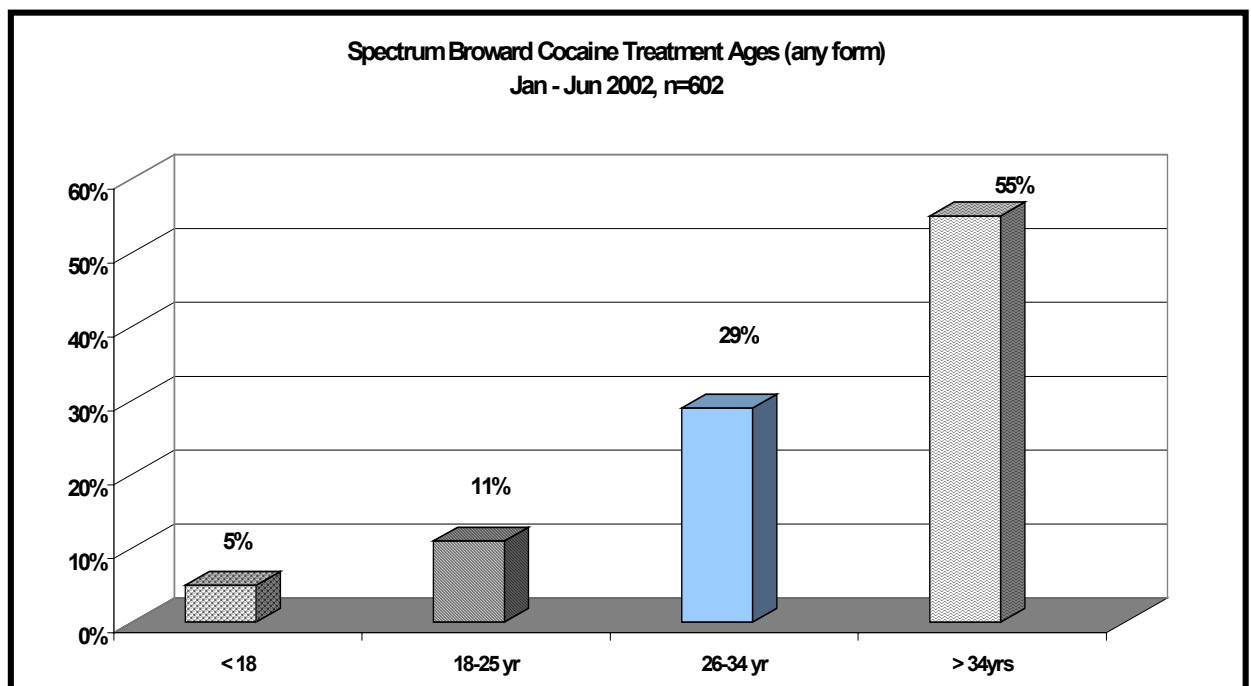


**Addiction treatment profiles for this report were compiled using data from Spectrum (Broward data only). A comparison to previous data is impossible as we do not have BARC data. (Exhibits 2A & 2B)**

## Exhibit 2A



## Exhibit 2B



### **Cocaine Availability, Price & Purity**

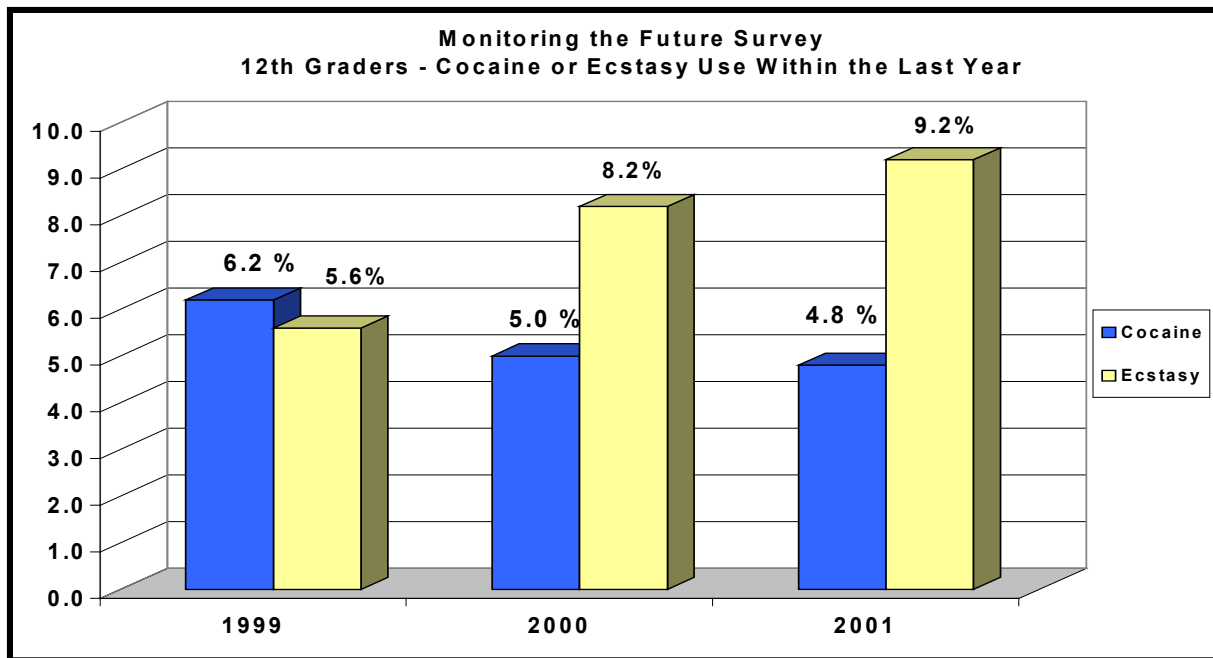
Powder Cocaine and Crack are still described as “widely available” throughout Florida by Pulse Check: Trends in Drug Abuse-April 2002. Cocaine is still the most commonly analyzed substance by the Broward Sheriff’s Office Crime Lab where it accounted for 3156 items

analyzed, the second most commonly analyzed substance was marijuana (348 items), and alprazolam was third with 296 items.

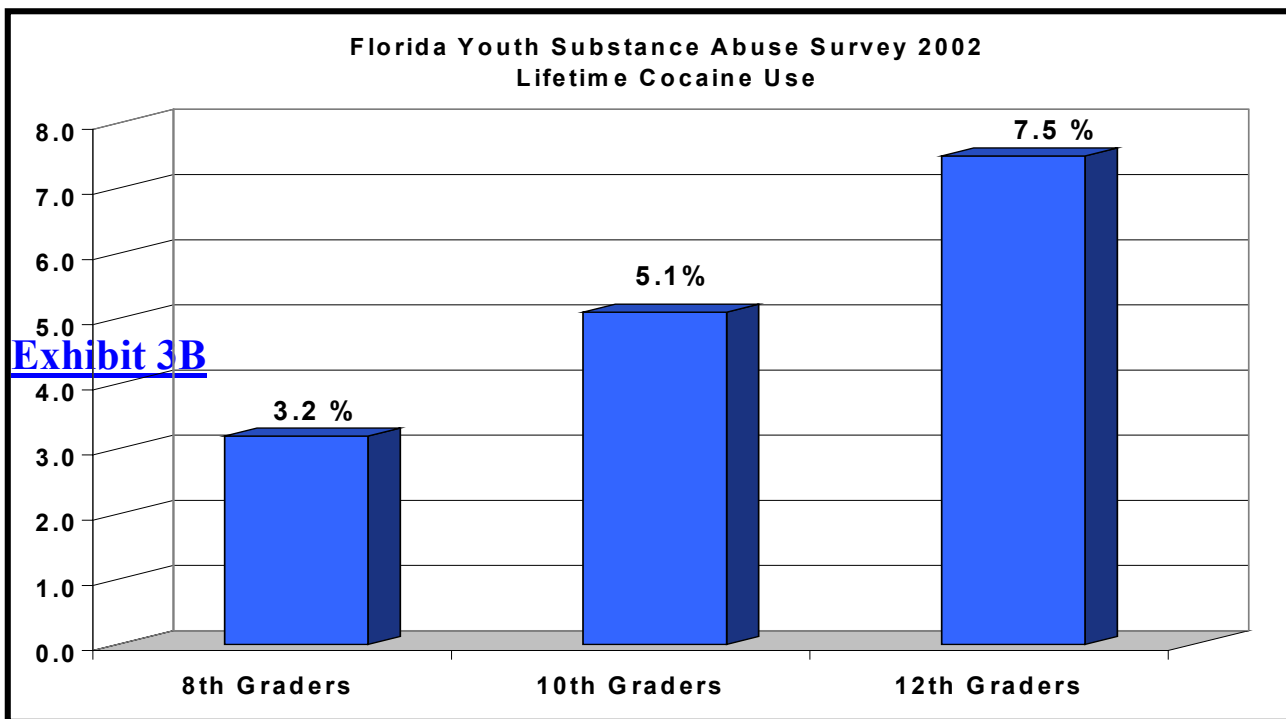
Crack cocaine sells for \$10-\$20 per "rock"

### Cocaine Survey Data

#### Exhibit 3A



The 1999 NIDA-funded Monitoring the Future Survey found 6.2% of 12<sup>th</sup> graders nationally had used some form of cocaine in the past year. That figure was down to 5% in 2000 and down to 4.8% in 2001. In addition, crack use within the last year also declined from 2.7% in 1999 to 2.2% in 2000 to 2.1% in 2001 also among 12<sup>th</sup> graders nationally.



#### Exhibit 3B



In the State of Florida, the 2002 Florida Youth Substance Abuse Survey revealed that 3.2%, 5.1%, and 7.5% of 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> graders Florida youth surveyed had ever used cocaine. This was all down from a 2000 survey that had 4.4, 7.8, and 8.7% of 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> graders respectively having tried cocaine in their lifetime.

## **BSO Crime Lab**

Cocaine remains by far the most common drug worked by BSO Crime Lab. There were 3156 cocaine cases worked by the BSO Crime Lab in the first six months of 2002. This compares with 2838 cases in the last 6 months of 2001, and 3848 cases in the first 6 months of 2001. For comparison, marijuana was the second most common case worked, and there were only 348 of those.

Beginning in 2001, the Crime Lab began working only those cases submitted by the State Attorney's Office, and of those cases only the items requested. This has resulted in about a 20% decrease in the number of items tested.

# **Heroin/Opioids**

In the first half of 2002, there was a similar number of heroin deaths as in previous 6 month period. However, there was also a similar number of oxycodone deaths, an increase in hydrocodone deaths and a large number of methadone caused deaths as well. So that opioid deaths have continue to climb. What we may be experiencing is a shift first from heroin to oxycodone than from oxycodone back to heroin. Now it appears an opioid diversification has transpired from oxycodone to heroin and methadone and other opioids such as hydrocodone. Most emergency department visits for heroin or oxycodone are for withdrawal or because the patient is seeking detoxification. Most deaths, ED visits, and addiction treatment admissions continue to be older white males.

## **Heroin Deaths**

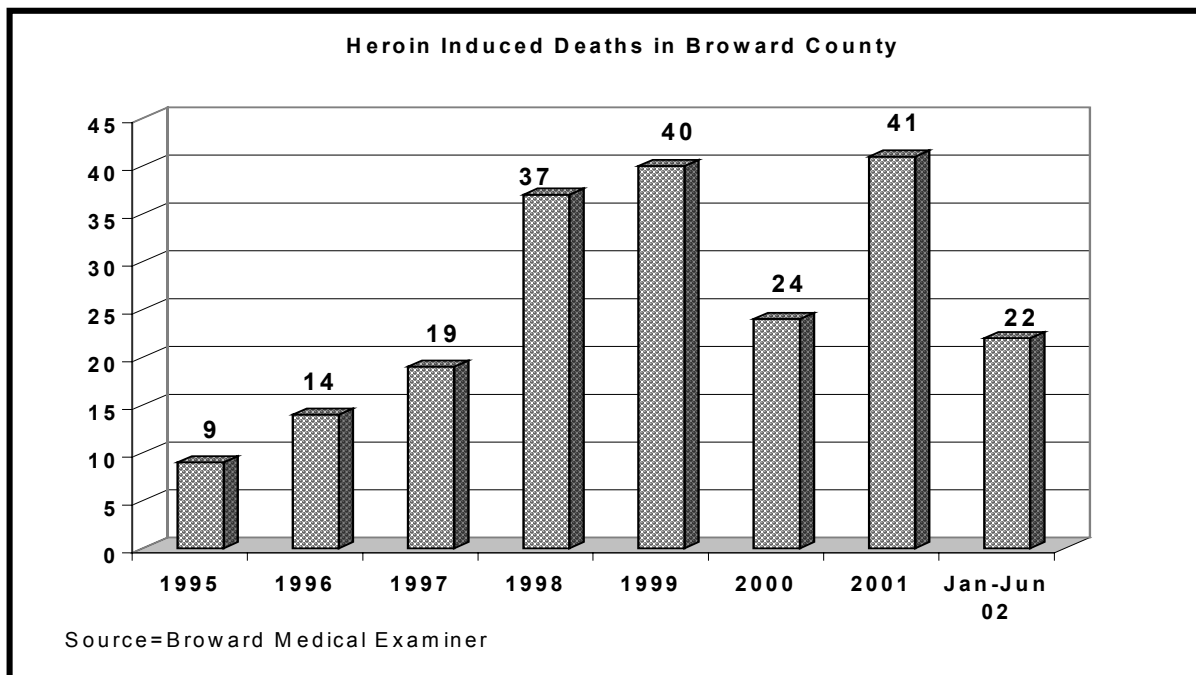
Throughout Florida, there were 120 heroin deaths in the first half of 2002; this is down 10% from the previous six months.

In the first six months of 2002, there were a total of 22 deaths in Broward where Heroin was considered a cause of death. In 2 of these deaths, the combination of heroin and cocaine was determined to be the cause, 1 death was caused by oxycodone and heroin. Heroin alone was involved in 7 deaths, while heroin combined with alcohol and/or benzodiazepines in various

combinations accounted for the remaining heroin deaths. Interestingly, there were no methadone/heroin combination deaths although there were 17 methadone caused deaths and 22 heroin caused deaths.

Twenty of the 22 (91%) Broward heroin decedents during the first six months of 2002 were white (two were Hispanic), which was very similar to 2000 (92% white), 1999 (95% white) and 1998 (97% white). The decedents continued to be predominantly male 19/22 (86%) which was also similar to the last several years. Eight decedents were in their forties in 8/22 (36%), 4/22 (18%) were in their fifties, 5/22 (23%) were in their thirties, 5/22 (20%) were in their twenties, and there were no teenagers. All but two of these overdoses were considered accidental, and there may be some additional cases still pending toxicology at this time.

#### **Exhibit 4**



**Heroin Emergency Department/Hospital Data:**

Based on a daily review of all emergency department charts at Broward General Medical Center for the first half of 2001, there were a total of 65 heroin cases (5% of all illicit substance abuse). This was down slightly from the second half of 2001 (70 cases 6%) and from the first half of 2001 (89 cases 7%). However, the total for 2001(159) was up 15% from 2000 when there were 138 cases for the entire year.

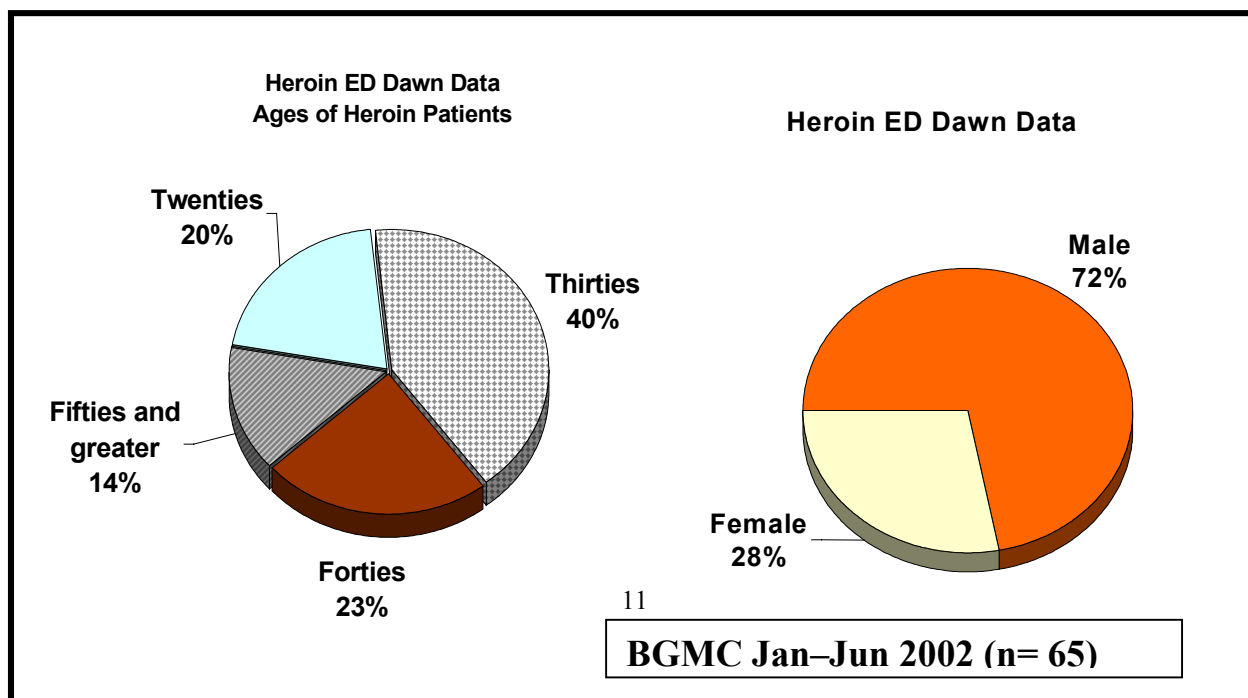
The heroin cases in the first half of 2002 were predominantly older white males experiencing withdrawal and/or seeking detoxification. In the first half of 2002, there were 47/65 (72%) male and 54/65 (83%) were white. This compares with the second half of 2001 when 47/70 (67%) were male and 45/70 (64%) were white and the first half of 2001, when seventy-three of the 89 cases (82%) were male, and 67/89 (75%) were white.

There were only two teenagers, while 13/65 (20%) patients were in their twenties, 26/65 (40%) in their thirties, 15/65(23%) in their forties, and 9/65 (14%) were fifty years old or older.

The route of drug administration for 20/65 (31%) of the **heroin cases** was injecting. In 42/65 (65%) **heroin cases** the route of drug administration was unknown/not documented, in only two of the 65 (3%) of the heroin cases, the drug was documented as snorted, and in one case it was smoked.

Heroin was the sole drug of abuse (with or without alcohol) in 26/65 (40%) cases, cocaine was a co-exposure in 31/65(48%), heroin was used with a benzodiazepine in 17/65 (26%) cases, and heroin was used with marijuana in 7/65 (11%). Alcohol was involved in 34/65 (52%). The most common reason for the patient to visit the ED was withdrawal/seeking detox in 26/65 (40%) of the cases. Depression accounted for 11/65(17%) of these cases, followed by altered mental status/overdose 6/65 (9%). Psychosis and chest pain each accounted for 5/65 (8% each) of cases, and three heroin abusing patients experienced a seizure (5%).

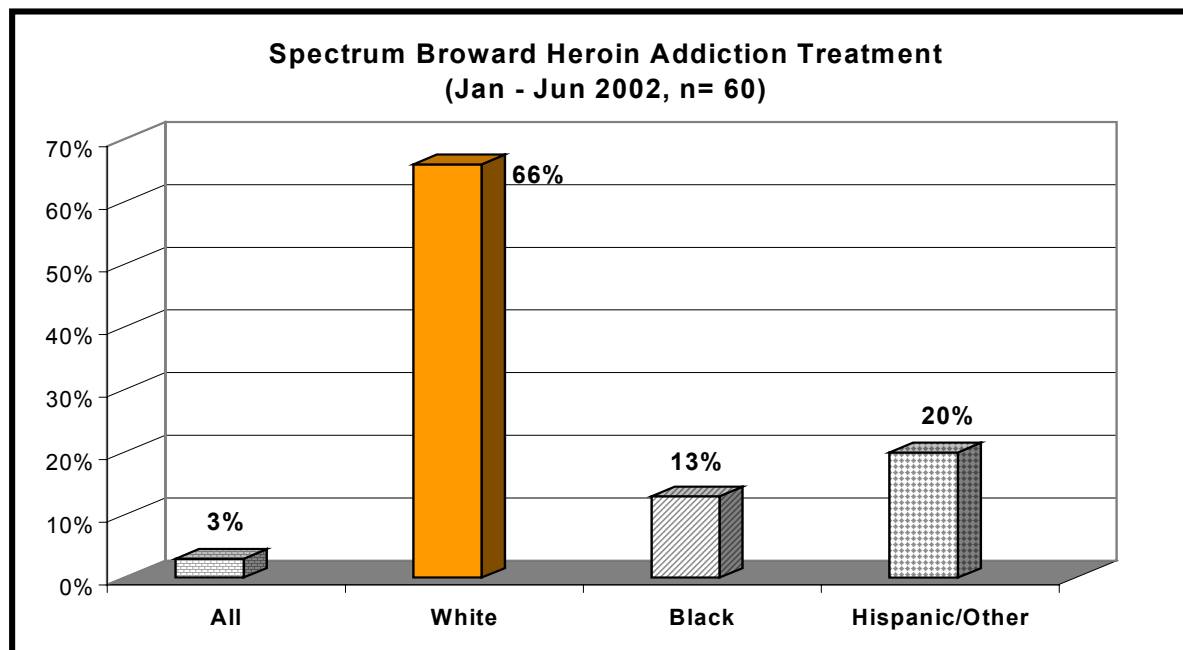
## Exhibit 5



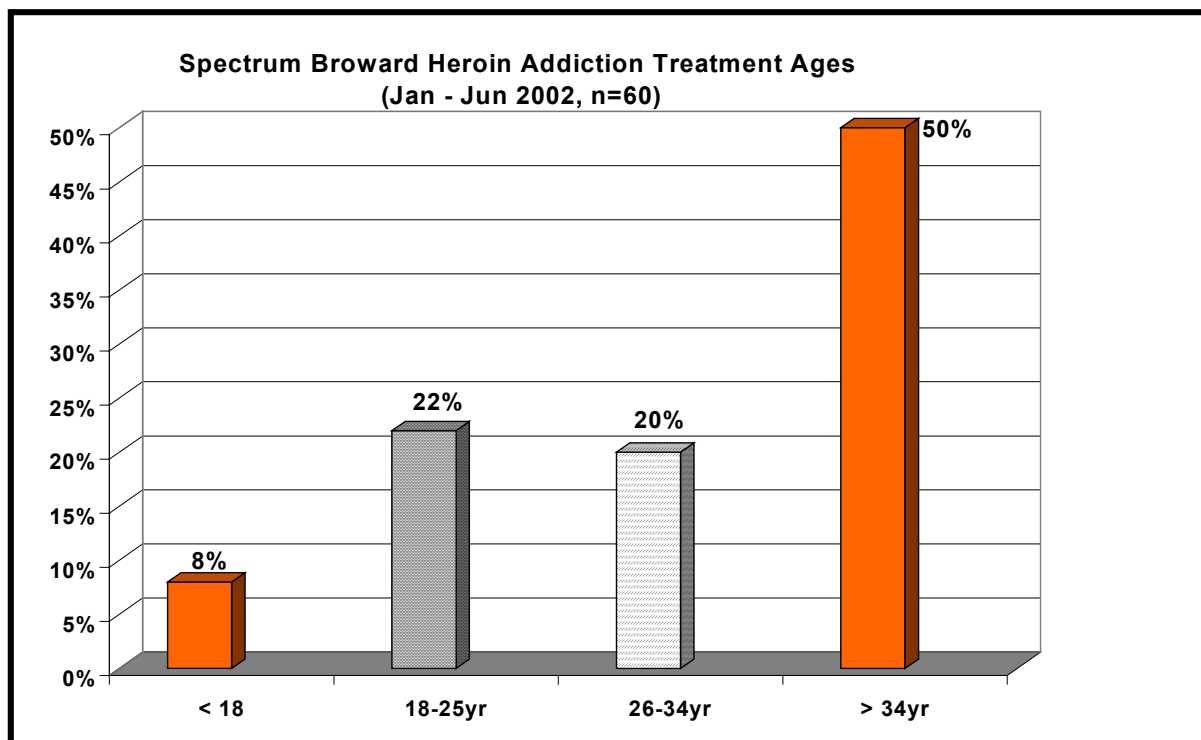
## Heroin Addiction Treatment Profiles

*Addiction treatment profiles for this report were compiled using data from Spectrum (Broward data only). A comparison to previous data is impossible as we do not have BARC data. (Exhibits 6A & 6B)*

### Exhibit 6A



## **Exhibit 6B**



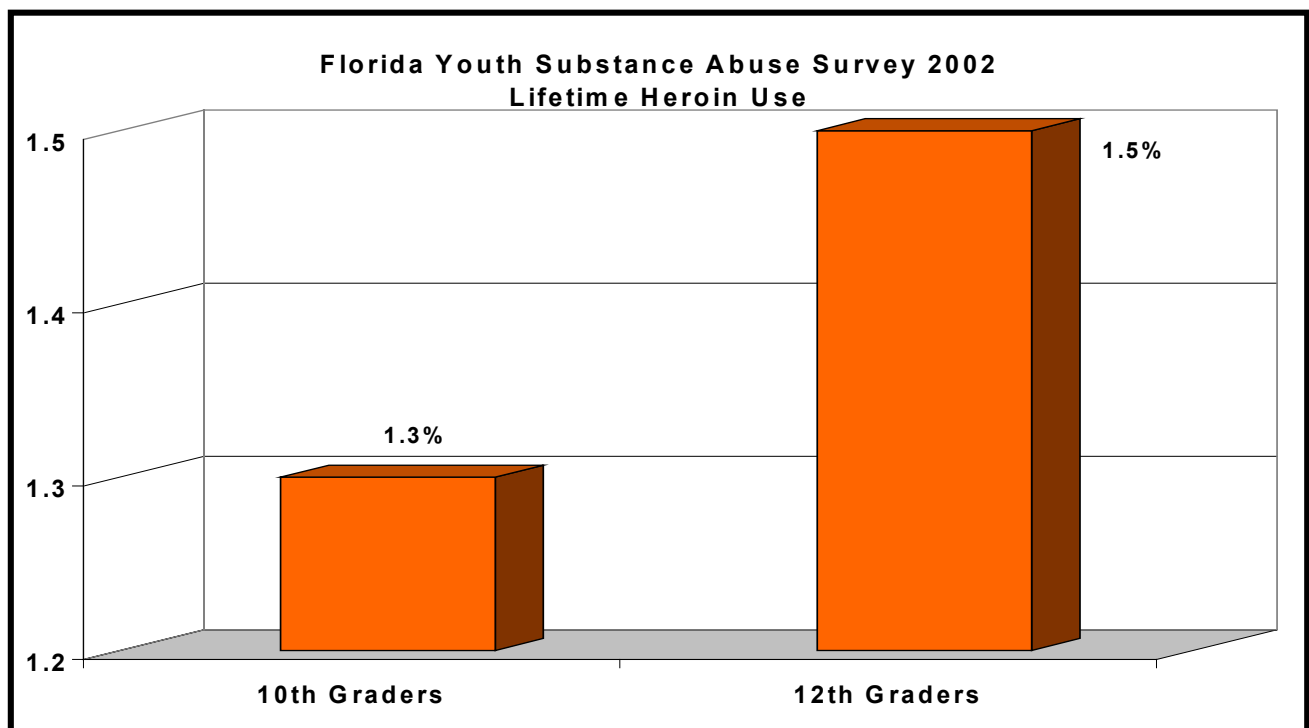
### **BSO Crime Lab**

There were 102 heroin cases worked by the BSO Crime Lab in the first six months of 2002, this compares with 75 heroin cases in the last half of 2001. There were 74 heroin cases during the first half of 2001.

### **Survey Data**

NIDA's Monitoring the Future(MTF) national survey of adolescent drug abuse revealed a statistically significant decrease in lifetime heroin use among 10<sup>th</sup> and 12<sup>th</sup> graders between 2000 and 2001, going from 2.2% to 1.7% among 10<sup>th</sup> graders and from 2.4% to 1.8% among 12<sup>th</sup> graders. Results from the 2002 Florida Youth Substance Abuse survey reveal that the lifetime use of heroin among 10<sup>th</sup> graders was 1.3% and among 12<sup>th</sup> graders 1.5% . In both cases the Florida youth lifetime use is less than the national average as reported by the MTF survey.

## **Exhibit 7**



### Heroin Price and Purity

Colombian Heroin is still described as widely available in South Florida among law enforcement and described as somewhat available by epidemiologists/ethnographers. As per the ONDCP's Pulse Check-April 2002, 1gm of heroin sells for roughly \$120, and one street name given to heroin in the southeastern US is "bin laden murder one"

# Oxycodone

Oxycodone is a semisynthetic opioid oral analgesic. It is a prescription pain medication and a schedule II controlled substance. Oxycodone (usually 5-10mgs) is found in a variety of brand and generic medications alone or in combination with acetaminophen or aspirin such as Tylox, Percocet, Percodan, Roxicet, Roxicodone, Endocet, Endocodone, Endodan etc.

In addition, there is a sustained release product of oxycodone made by Purdue Pharma and approved by the FDA in 1995 with the brand name OxyContin. OxyContin is designed to deliver oxycodone in a controlled release manner over a twelve-hour period. However, if the OxyContin pill is crushed up and snorted or injected or chewed up and swallowed the full effect

of the potentially lethal dose is immediate. OxyContin tablets 10,20,40, and 80mgs are selling on the street for anywhere from \$0.25-\$1 per milligram.

In CY 2000, Florida ranked 5<sup>th</sup> in the nation behind West Virginia, Alaska, Delaware, and New Hampshire in the # of OxyContin prescriptions per 100,000 population. However, since Florida is by far the most heavily populated state in the top 5, Florida is the largest market for OxyContin. Since there is no prescription monitoring program in Florida, it should come as no big surprise that OxyContin abuse should be common in Florida.

In December of 2001, Gov. Jeb Bush unveiled legislation to establish a prescription drug database in Florida very much like 18 other states to combat prescription drug abuse. However, this legislation did not pass in 2001. In November 2001, the Florida State's Attorney began investigating the marketing practices of Purdue Pharma to see if they were deceptive or misleading. In December of 2001, a Mexico City distribution center for OxyContin was robbed, and armed thieves made off with almost 1 million tablets worth more than \$20 million. In July 2002, a tractor trailer truck containing \$3 million worth of prescription drugs was hijacked, the trucks destination was Miramar. A physician in Jupiter in July 2001 and a physician in the panhandle of Florida were both charged with murder related to prescribing OxyContin. A third physician was charged with drug trafficking and manslaughter in June of 2002 after 14 of her patients died within 2 years.

Diverted OxyContin is being sold in the same places that had traditionally sold crack cocaine as per law enforcement in the ONDCP's Pulse Check-April 2002.

### **Oxycodone Deaths**

There were 112 oxycodone caused deaths in Florida in the first six months of 2002 which represents a 20% decrease from the 140 reported in the previous six month period.

During the first six months of 2002, there were 22 Broward deaths where oxycodone was specifically mentioned as a cause of death.

There were 13, 18, 24, and 25 (this number has been updated from previous report) oxycodone caused deaths in the previous four six month periods respectively. There may be some additional cases still pending at this time.

In the first six months of 2002, **OxyContin** was specifically mentioned in 11/22 (50%) and in most cases the route or method (crushing up or chewing up of tablets) of administration was not mentioned, however, in the 4/22 cases where a route of administration is mentioned, three were by mouth and one snorted and injected. (17/22) were considered accidents and 4/22 (%) were suicides.

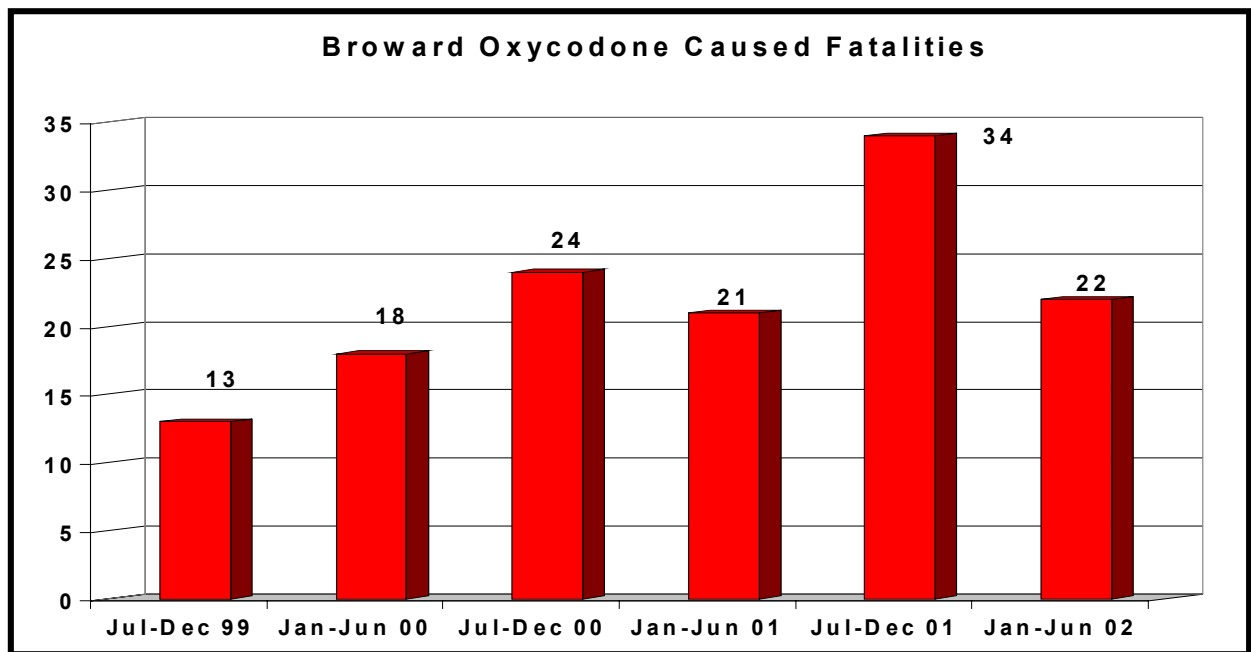
There was one teenager (5%), four decedents were in their twenties (18%), eleven were in their thirties (50%), four decedents (18%) in their forties, and two decedents (9%) were fifty or older. Twenty-one of the twenty-two Broward oxycodone overdose decedents were white (95%), and 15/22 (68%) were male.

As with most fatal overdoses, these deaths rarely involve one drug only. In fact, only 1/22 oxycodone-caused deaths in the first half of 2002 involved oxycodone alone.

In 14/22 (64%) some benzodiazepine was also considered a cause, and a benzodiazepine was present although not considered causative in 2 additional cases. Of those benzodiazepine/heroin caused fatalities, alprazolam (Xanax) was by far the most common with 12/22 (54%) involved either on tox screen or by history. In 2/22(9%) heroin and oxycodone combined to cause the death. In 4/22 (18%) methadone was also a cause of death in combination with oxycodone. Hydrocodone, cocaine, and alcohol were also combined with oxycodone in several deaths.

In addition, there were 9 additional non-oxycodone deaths where hydrocodone was considered a cause of death, and 14 non-oxycodone deaths where methadone was considered a cause. These #'s have increase from 5 and 10 respectively in the previous six months. All of these hydrocodone and methadone deaths involved white decedents.

### **Exhibit 8**



### **Emergency Department/Hospital Oxycodone Data**

During the first six months of 2002 there were 38 oxycodone cases, and this represents a decrease from 46 cases in the last six months of 2001, and from 58 cases in the first 6 months of 2001. There were 21/38(55%) men and 17/38(45%) women, 34/38 (89%) were white, and the ages of these patients ranged from 16-53 years old. There was one teenager, six (16%) patients in there twenties, 16 (42%) in their thirties, 12 (32%)in their forties, and three (8%) were fifty years old or older. OxyContin was specifically mentioned in 23/38(61%) of these cases. The route of administration was unclear upon reviewing most charts.

In 13/38(34%) of these cases the reason for visiting the ED was dependence/withdrawal. In 6/38 (16%) cases it was clearly for recreational use, in 10/38(26%) of cases the oxycodone was being used for other psychic effects (such as excessive amounts for pain etc.), and in 7/38(18%) of cases the oxycodone was taken in a suicidal gesture.

Two (5%) patients presented with central nervous system depression, and there were also two patients presenting because of convulsions. Six (16%) patients received naloxone. One



patient died, ten (26%) patients required hospital admission, and the remaining patients were treated and released from the emergency department. Coingestants in these cases include benzodiazepines in 12/38 (32%) especially alprazolam –8 cases, marijuana in 6/38 (16%), cocaine in 15/38 (39%) , other opioids such as heroin or methadone in 11/38 (29%) , and hydrocodone 1/38 (2%).

### **BSO Crime Lab:**

The BSO Crime Lab worked 115 oxycodone cases in the first half of 2002. This compares with 95 oxycodone cases in the last 6 months of 2001, 80 such cases in the first 6 months of 2001, 71 in the last 6 months of 2000, and 69 in the first 6 months of 2000.

There were also 88 **hydrocodone** cases in the first half of 2002. This compares with 69 *hydrocodone* cases in the last 6 months of 2001, 44 in the first 6 months of 2001, 58 in the last 6 months of 2000, and 69 in the first half of 2000.

# **Marijuana**

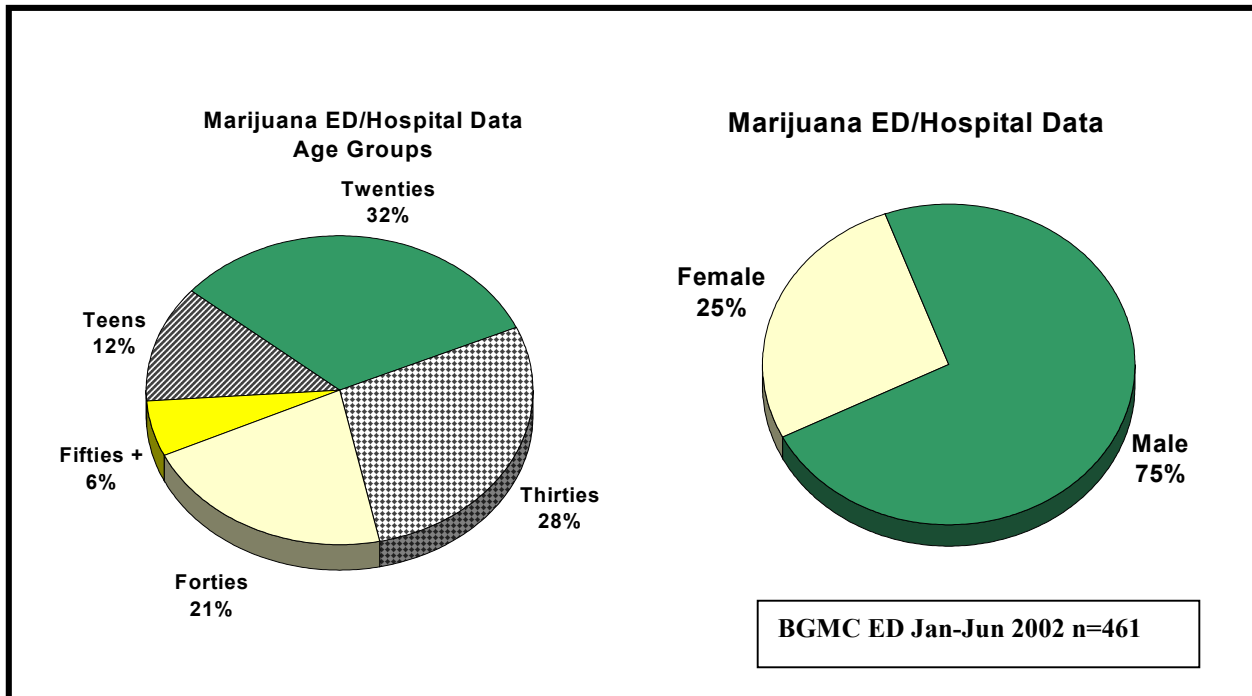
### **Marijuana Emergency Department/Hospital Data**

For the 1<sup>st</sup> six months of 2002, a daily review of all emergency department charts at Broward General Medical Center (BGMC) was conducted to gauge illicit substance abuse related emergency department cases. 36,621 charts were reviewed, and 3.4% or 1249 cases of drug abuse were found. This was an average of approximately 7 per day. During the last half of 2001, 3.4% of all cases involved illicit substance use averaging approximately 6 per day.

Of these, 461/1249 (37%) involved marijuana, up from 389/1154 (34%) in the last half of 2001. There were 215/461 (47%) marijuana alone with or without alcohol cases. Seventy-five percent or 346/461 (75%) were male, 57/461 (12%) were teenagers, 148/461 (32%) were in their twenties, 131/461 (28%) were in their thirties, 96/461 (21%) were in their forties and 29/461

(6%) were fifty years old or older. The races of these patients were as follows; 265/461 (57%) white, 171/461 (37%) black, 25/461 (5%) Hispanic/ other/unknown.

## **Exhibit 9**



There were 156/461 (34%) cases of marijuana in combination with cocaine, which was discussed briefly in the cocaine section of this report. Marijuana was also found in combination with ecstasy or amphetamine in 26 additional cases.

In 69/461 (15%) alcohol was the only documented coingestant with marijuana.

The most common reasons for marijuana ED visits were as follows ;

1. Depression/suicidal 121/461 (26%)
2. Trauma 58/461 (13%)
3. Psychiatric related (hallucinations, anxiety, bizarre behavior, delusions etc.) 48/461 (10%)
4. Chest pain 44/461 (9%).
5. Altered mental status 37/461 (8%)

Marijuana is still the most popular drug among young people visiting the emergency department. Roughly 59%, (159/268) of all illicit substance abuse cases in the age group 12-25yrs old involved marijuana. This compares with 53% (112/210) in the last half of 2001. The reasons for the younger patients coming to the ED after using marijuana are similar to the total group listed above, 1. depression/suicidal 24/159(15%), 2.psychiatric related 17/159 (11%), 3. trauma 16/159(10%) , 4. chest pain 9/159 (6%), and with convulsions and altered mental status each accounting for 8/159 (5%).

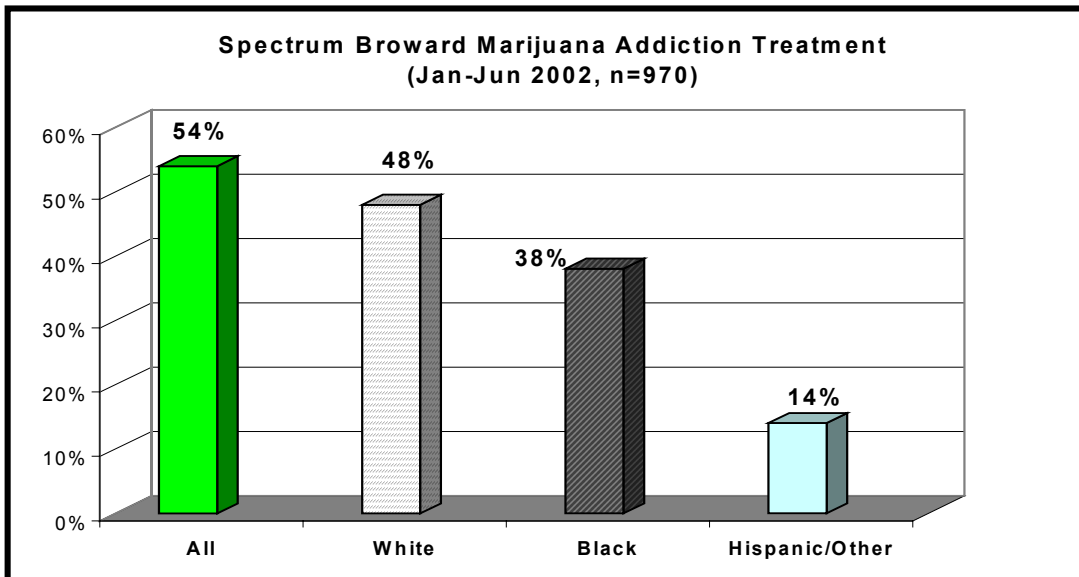
Only 68/268 (25%) of the illicit drug use cases in this age group involved cocaine (only 13 of these were crack cocaine), this cocaine total in this age group was down from 35% in the previous six month period. In the first 6 months of 2002, 56/268(21%) of the young illicit drug

use cases involved benzodiazepines with 21 of these being alprazolam. There were 12/268 (4%) GHB cases, and 9/268 (3%) ecstasy cases although there were another 12 unknown amphetamine cases. There were 10/268 (4%) involving heroin, and 5/268 (2%) involving oxycodone. This totals to more than 100% because some cases are combinations.

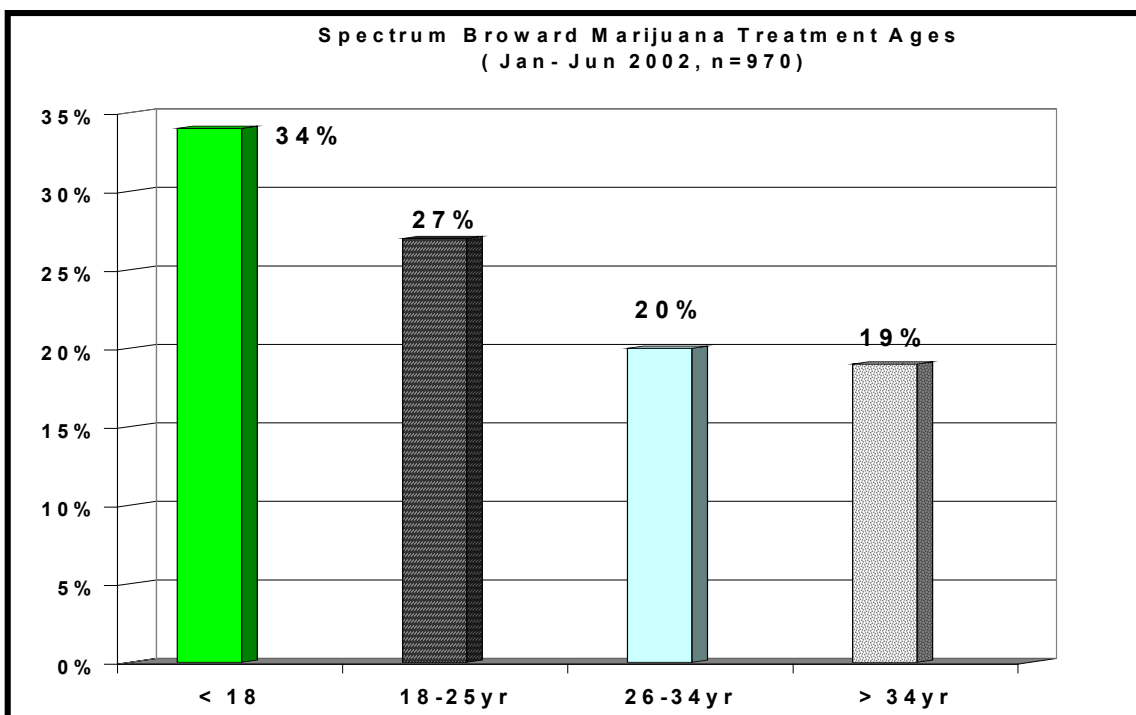
## Marijuana Treatment Profiles

*Addiction treatment profiles for this report were compiled using data from Spectrum (Broward data only). A comparison to previous data is impossible as we do not have BARC data. (Exhibits 10A & 10B)*

### Exhibit 10A



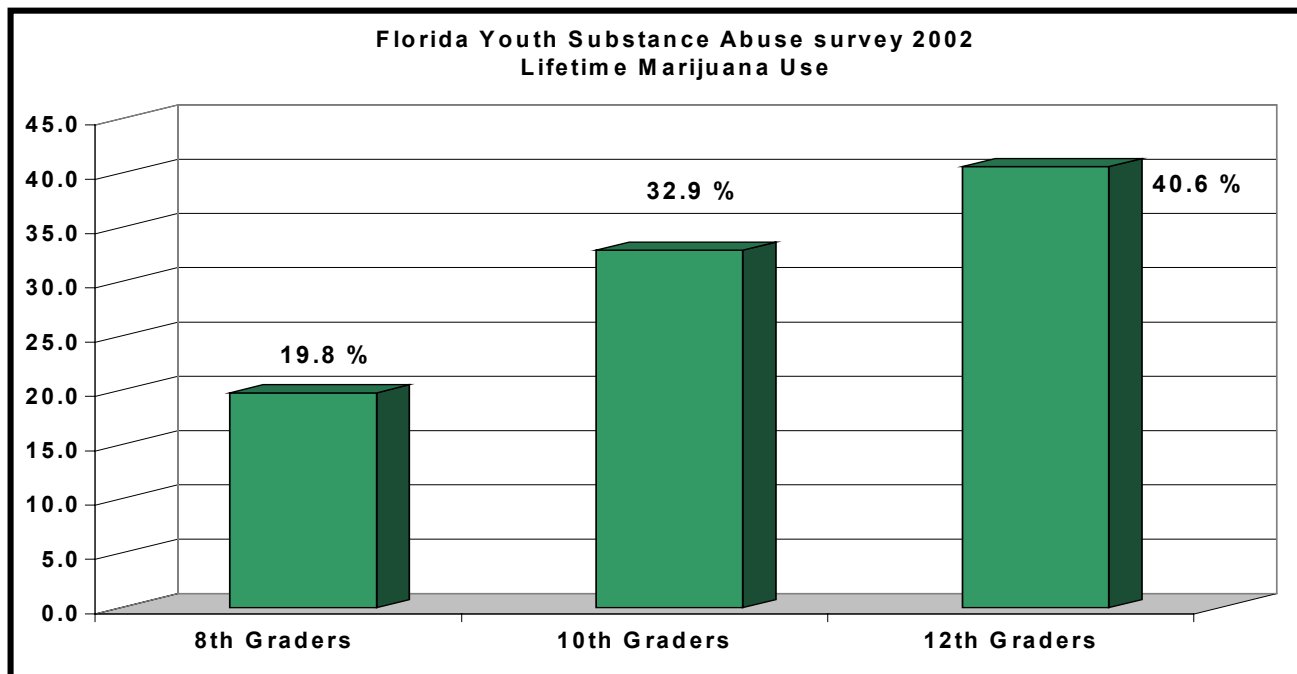
### Exhibit 10B



## Survey Data

The Florida Youth Substance Abuse Survey reported decreases in lifetime marijuana use over the last two years to 19.8%, 32.9%, and 40.6% lifetime use among 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> graders surveyed in 2002. Those figures were 24.4%, 38.6%, and 43.9% in 2000.

## Exhibit 11



# Gamma Hydroxybutyrate (GHB)

There are some indications that GHB abuse has begun to decline in South Florida. For example GHB related ED visits have dropped to less than half of what it was last year at this time. GHB or gamma hydroxyl butyrate is an anesthetic and CNS depressant. The drug is known by numerous street names including liquid X, G, scoop, Somatomax, Georgia Home Boy, etc., and there are several compounds, which are converted in the body to GHB. Two important precursors to GHB that are being abused as well → gamma butyrolactone (GBL) and 1,4 Butanediol (BD).

Gamma butyrolactone containing products may have ingredients listed as *furanone, furanone dihydro, 4-butyrolactone, dihydro-2 (3H)- furanone dihydro, tetrahydro-2-furanone, and butyrolactone gamma*. Brand name examples of gamma butyrolactone include Blue Nitro, Renewtrient, GH Revitalizer, Gamma G, Remforce, Firewater, ReActive, Rest-eze, Beta-Tech, Thunder, Jolt, and Verve.

Butanediol (BD) containing products may list active ingredients as *tetramethylene glycol, sucol B, 1,4-butylene glycol, butane-1, 4diol, butylene glycol, and 1,4-tetramethylene glycol*. Some brand names of BD containing products include, Zen, Serenity, Somatopro, InnerG, NRG3,

Enliven, Growth Hormone Release Extract (GHRE), Thunder Nectar, Weight Belt Cleaner, Rest-Q, X-12, Dormir, and Amino Flex, Orange FX, Rush, Lemon fX Drop, Cherry fX, Bomb, Borametz, Pine Needle Extract, Promusol, and BVM. Artfully worded labels often say that this product does not contain GHB or 2(3) furanone dihydro. In addition, these labels may state that this product is a cleaner and that it is harmful if swallowed. However, it is sold in health food stores with dietary supplements, and a 32oz bottle typically sells for \$40- \$70. This is similar to what GBL and GHB containing products were selling for and far out of proportion with what most reasonable people would pay for a “cleaner”.

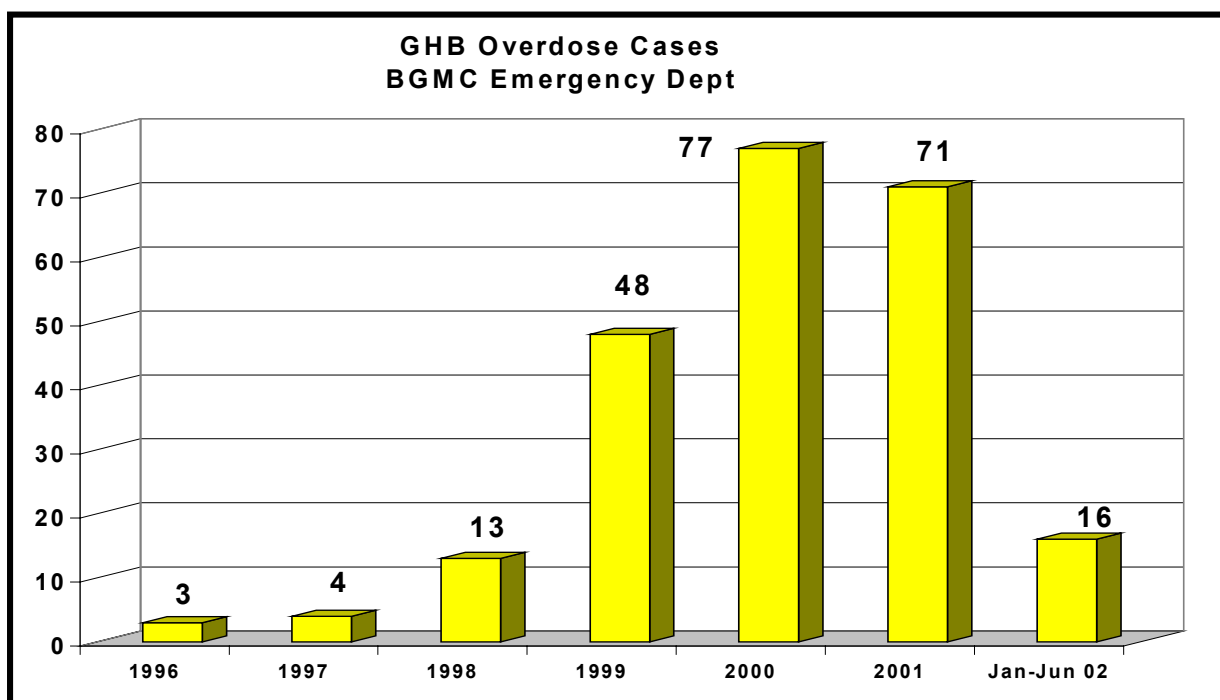
These products have become popular at the “rave” scene and other parties, are commonly mixed with alcohol, have been implicated in drug rapes and other crimes, have a short duration of action, and are not easily detectable on routine hospital toxicology screens.

In July 2002, GHB, listed as sodium oxybate, was approved by the FDA for the use in narcolepsy. It will be dispensed under the brand name Xyrem in a new “closed” system of distribution.

### **Emergency Department Data**

There was a dramatic decrease in the number of GHB emergency department cases treated in the first six months of 2002. The Broward General Medical Center Emergency Department treated 16 people with GHB or GHB precursor overdose. This compares with 39 in the last six months of 2001, 32 in the first 6 months of 2001, and 77 in all of 2000. (Exhibit 12).

## **Exhibit 12**



In most of the GHB overdose cases during the first half of 2002, the reason for the ED visit was decreased responsiveness/coma usually lasting less than three hours.

The ages of the GHB toxicity patients ranged from 19-35yrs with an average of 24.3 yrs. There were two teenagers (13%), 11 (69%) in their 20's, and 3(19%) in their 30's. Twelve of these GHB overdose patients were men (75%) and 4 (25%) women, and 14/16 (88%) were white non-hispanic, 1/16(6%) was American Indian, and the race/ethnicity was unknown in 1/16(6%) cases.

**A urine toxicology screen was** amphetamine positive in 2/16(13%), cocaine positive in 2/16(13%), and marijuana positive in 2/16(13%). A urine toxicology screen was not obtained on every case.

Alcohol was involved in 7/16 (44%) of the cases by history or because an alcohol level was obtained. The GHB cases where a blood alcohol level was obtained ranged from 0-212 mgs/dl.

The location of the incident requiring the ED visit was a local bar/nightclub or the beach in 4/16(25%). Many, 10/16 (63%) presented to the ED between 11PM and 6 AM.

Many patients were temporarily unresponsive, and two (13%) required intubation and mechanical ventilation. At least 4 (25%) of the 16 patients vomited. Most patients were treated and released in several hours from the ED. However, one of the 16 patients required hospital admission.

## **BSO Crime Lab**

In the first half of 2002, there was 6 GHB, 8 GBL, and 6 butanediol cases in the first half of 2002. In the last half of 2001, there was 1 GHB, 8 GBL, and 3 butanediol cases analyzed by the BSO Crime Lab. This compares with 2 GHB, 5 GBL, and 4 butanediol cases in the first half of 2001. There were only three GHB cases and 1 gamma butyrolactone GBL cases analyzed by the BSO Crime Lab from July 1-December 31, 2000. This compares to twelve GHB related cases and one GBL case analyzed at BSO Crime Lab from Jan 1-June 30, 2000.

## **GHB Deaths**

There were three GHB caused fatalities in the first six months of 2002 in Broward County.

The first involved a 30yr old white male was found unresponsive by a friend with two empty bottles of medication amitriptyline (an antidepressant) and gabapentin (an antipsychotic/anticonvulsant). He was pronounced dead at the scene. On autopsy, the two medications found with the decedent at the time of his death were measured in his blood, where they were both found to be at a therapeutic level. No other drugs or alcohol were detected. Since a viable cause of death could not be found, a blood GHB level was assayed and came back at the highest level ever measured in Broward County and quite possibly the highest ever anywhere (2520mg/l). Given this information the cause of death was "acute drug toxicity-GHB" and the manner was ruled a suicide. There was no further clarifying history regarding a past or recent history of GHB abuse.

In a second death, a 33 yr old white male with a history of alcoholism, drug abuse, and depression was found unresponsive by his roommate. There was again no specific history of

GHB abuse, but a blood level was taken as part of the autopsy. His blood level was also extremely high at 1600mg/l, and he was also positive for benzodiazepines. His blood alcohol level was negative. This death was considered caused by GHB and also suicidal.

The third death involved a 21 yr old white male with a history of alcoholism but apparently no specific history of GHB abuse. He was found unresponsive and not breathing in bed by his mother with vomitus in and around his mouth. Attempts at resuscitation by Fire Rescue and the emergency department were unsuccessful. Initially, the medical examiner ruled that he had died of natural causes. However, on autopsy a GHB blood level was done which was 589mg/l so the case was reclassified as an accidental GHB caused drug death. There was no alcohol or other drugs detected in the decedent at autopsy, and while no specific GHB abuse history was documented, he was a user of multiple "health foods".

From 1996-June 2002, in Broward County, there have been a total of 14 deaths that involved GHB in some way (two in 1996, two in 1997, three in 1998, one in 1999, three in 2000, and three more in the first six months of 2002).

In twelve of these cases, GHB was mentioned as one of the causes of death. In one other case, the patient was admitted to a hospital for GHB intoxication, appeared to have recovered from that and subsequently succumbed due to other reasons. In one other death, the patient was brought dead on arrival to the BGMC emergency department as a multiple drug overdose including GHB by history, however; the medical examiner found GHB to be non-contributory.

Ten of the twelve GHB **caused** fatalities involved coingestants including alcohol, cocaine, marijuana, benzodiazepines, opioids, carisoprodol (Soma), sertraline (Zoloft), gabapentin, amitriptyline, and MDMA (ecstasy). Alcohol was detected in 7/12 cases from 90-340mgs/dl (legally drunk in Florida is 80mgs/dl). Two fatalities involved no known or detected coingestants and no alcohol. These cases are important to point out because it refutes the commonly espoused misperception that GHB is only fatal when another CNS depressant is also taken with GHB. Two of the twelve were ruled suicides and had extremely high levels in the blood.

# MDMA (Ecstasy)

MDMA, (3,4 –Methylenedioxymethamphetamine), also known as Ecstasy is an hallucinogenic amphetamine which has become popular not just as club drug at raves but as a mainstream recreational drug among young people. The psychoactive, synthetic, DEA Schedule I drug has gained the reputation as a “hug drug” which can promote empathy, relaxation, and sexuality. Many indicators such as crime lab statistics, drug confiscations in the area, and national survey data point to a high level of abuse of this drug. For the first time, in 2000, more teens said they had abused ecstasy than cocaine. This trend has continued so that in 2001, almost twice as many 12<sup>th</sup> graders nationwide (9.2%) say they've used ecstasy in the last year than say they've used cocaine (4.8%). Now in 2002, in the Florida Youth Survey, twice as many 12<sup>th</sup> graders have tried ecstasy as have tried cocaine, and ten times as many 12<sup>th</sup> graders have tried ecstasy as have tried crack cocaine.

Each pill generally contains 75-125mgs of MDMA, although pills are often adulterated and may contain on MDMA. Wholesale prices in the United States are approximately \$8/tab but they may retail in clubs and “raves” for \$10-50.

The major source of the designer logo emblazoned pills seems to be clandestine labs in Western Europe especially the Netherlands and Belgium. Although, not verified, there are rumors of clandestine labs in South Florida beginning MDMA production, and more recently some evidence that the Colombians are trying to get into the market. It has become increasingly difficult to determine by chart review if ecstasy or other types of amphetamines were involved with ED cases. This is because methamphetamine and other amphetamines have become increasingly popular. In addition, patients rarely say and therefore it is rarely documented, the exact amphetamine that was taken. Although the urine toxicology screen may be positive for amphetamines, this does not reliably distinguish between MDMA and other amphetamines. Since some of the same patient population are using both, and in fact since



many ecstasy pills may be adulterated or substituted with other amphetamines the picture becomes even less clear.

### **BSO Crime Lab**

In the first half of 2002, the BSO Crime Lab worked 115 MDMA cases (only 1 MDEA and 2 MDA). This compares to 121 MDMA cases in the last half of 2001, and 132 ecstasy cases in the first 6 months of last year. MDMA was the fourth most common case worked, behind only cocaine, marijuana, and alprazolam.

### **Hospital Cases**

Hospital cases involving ecstasy during the first half of 2002 can be divided into three major categories; 1. Those where ecstasy is specifically mentioned in the medical record and the patient tests positive for amphetamines (there was only 1 of these cases), 2. Those where ecstasy is mentioned but the tox screen is either not obtained or negative for amphetamines (there were 9 of these cases), and 3. Those cases where ecstasy was not specifically mentioned but was suspected based on circumstances and the urine tox screen is positive for amphetamines. It has become increasingly difficult to determine a number in the last category with the increasing use of methamphetamine and other amphetamines other than ecstasy.

There were 45 additional cases where some type of amphetamine was either mentioned or analyzed by toxicology screening. 39/45 were amphetamine positive.

If we just add the first two categories, then there were only 10 ecstasy cases, if we also add the third category there were 55 cases. The actual number is probably somewhere in between.

By adding all three of these types of cases, there were a total of 30 cases where ecstasy was felt to be involved in the last half of 2001. This was down from 49 in the previous six month period.

There are several reasons to believe more and more of these amphetamine cases are methamphetamines or other amphetamines than ecstasy. First, with the increased airport security since September 11, 2001, there may be somewhat less ecstasy available. Secondly, methamphetamine and other amphetamines appear to be getting more popular and not just as cheaper more readily available adulterants or substitutes.

The clearly ecstasy (MDMA) cases were all young white non Hispanic patients ages 15-27 yrs old. Actually, 4/10 (40%) were teens, the rest were in their twenties. While 6/10 (60%) also tested positive for marijuana. Three 3/10 (30%) had used cocaine and only one of the ten cases had also used GHB, and 2 had alcohol (20%).

The reason for the emergency department visit was altered mental status/ decreased responsiveness in 2/10(20%)—Depression/suicidal ideation was the presenting complaint in 1/10 (10%), and six of the 10 patients (60%) were in the ED due to anxiety, agitation, confusion, paranoia or bizarre behavior

### **Deaths**

Methylated amphetamines were detected but not considered causative in 5 deaths in Broward in the first six months of 2002. Throughout Florida in the same time period there were a total of 52 deaths where methylated amphetamines were present with only 8 of these where the methylated amphetamine was described as being detected at lethal levels.

## Survey Data

As per the 2002 Florida Youth Substance Abuse Survey, lifetime ecstasy use among 12<sup>th</sup> graders at an alltime high (14.2%), and was used more often than any other illicit drug except marijuana. In fact, roughly twice as many Florida 12<sup>th</sup> graders had used ecstasy in their life as had used cocaine, and 10 times as many 12<sup>th</sup> graders had used ecstasy as had used crack cocaine.

According to the national Monitoring the Future Study, ecstasy was at an all-time high in popularity among 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> graders in 2001—again much more than cocaine among these age groups. In addition, there has been a sharp increase in the availability of ecstasy. In 1999, 40% of those teens surveyed said that ecstasy was fairly or very easy to get, by 2001, 62% claimed the drug was fairly or very easy to get. With this increased availability has come a decrease in price and giveaway deals which could result in new legions of users. Ecstasy is being used at private parties now as much as at raves.

Nationally, ecstasy was second to only to methamphetamine as far as club drug ED mentions/visits. There were 5542 ecstasy visits and that was up from 4511 in 2000.

## *Amphetamine/Methamphetamine*

Methamphetamine has traditionally been a much larger issue in California, Nevada, and throughout the West and Midwest United States than it has on the East coast. Even within the State of Florida, most amphetamine/methamphetamine cases were on the west coast in the Tampa area. There is some preliminary indications that that may be changing. There was a significant increase in methamphetamine cases worked by the BSO Crime Lab in the first 6 months of 2002. There were 41 such cases in the first half of 2002, which is more than the total of 39 worked throughout **all** of 2001. There were 30 cases in all of 2000.

In addition, local law enforcement have noted a recent increase in crystal methamphetamine use particularly among gay men where it is referred to as “Tina”. Finally, assuming the increased airport and port security since September 11 will result in a decreased supply of ecstasy, more easily produced, domestic amphetamines and methamphetamines are likely to be substituted to capitalize on available profits.

In fact, once again for the first six months of 2002, there were more BGMC ED cases where amphetamines of some type were either mentioned in the history or detected on tox screen, than there were ecstasy cases. There were a total of 45 such cases which compares to 29 cases in the last six months of 2001. These were predominantly white males, 38/45 (84%) were white and 35/45 (78%) were male. There were 6 teenagers (13%), 13/45(29%) in their twenties, 18/45(40%) in their thirties, six(13%) in their forties, and 2(4%) in their fifties. Most cases were amphetamine positive on tox screen 39/45 (87%), and in most cases the exact form of the amphetamine was not documented. However, crystal methamphetamine (a smokable form of methamphetamine) was specifically documented in 2 cases. Cocaine was a cointoxicant in 9/45 (20%), marijuana in 20/45 (44%), and GHB in 1/45 (2%). Fifteen patients (33%) came in for altered mental status, and 5 patients (11%) were described as “overdoses”. Four patients came in for GI problems, four for depression, and four for other psychiatric problems (9% each). Other common chief complaints included chest pain 3/45, convulsions 3/45, and trauma 3/45 (7% each).

## *Benzodiazepines (Alprazolam-Xanax)*

For a variety of reasons, it is much more difficult to track benzodiazepine abuse than other forms of substance abuse. However, there are certainly, some indicators that benzodiazepines in general and alprazolam (Xanax) in particular is a substantial problem. First, BSO crime lab worked 296 alprazolam cases in the first six months of 2002, 244 alprazolam cases in the last six months of 2001 and 258 in the first six months of 2001. This is almost three times as many as ecstasy and oxycodone cases. In fact, the BSO Crime Lab worked more alprazolam cases in 2002 than any other drug except cocaine and marijuana.

Benzodiazepines were second only to alcohol in their involvement in drug related deaths throughout Florida.

Benzodiazepines (BZD's) in general and alprazolam (Xanax) in particular seems to be popular among opioid abusers. BZD's were involved in 16 of the 22 oxycodone deaths and alprazolam was involved in 12 of those deaths in the first half of 2002. Among heroin caused fatalities BZD's were involved in 8 of the 22 deaths and alprazolam in 5 of these in the first half of 2002. BZD's were involved in 11 of the 16 methadone caused deaths, and in 8 of the 11 hydrocodone caused deaths in the first half of 2002 as well.

In addition, benzodiazepines were involved in 17 of the 30 Broward cocaine deaths in the first half of 2002.

Benzodiazepines were involved in 12/38 (32%) oxycodone hospital ED cases in the first 6 months of 2002, and the specific benzodiazepine, alprazolam was involved in 8/38 (21%) of the oxycodone cases.

Also, per discussions with Broward High School Substance Abuse Counselors, the most common drugs of abuse among high school kids is alcohol, marijuana, and Xanax. Students refer to them as "Xany Bars" or just "bars" .

### **Survey Data**

According to the 2002 Florida Youth Abuse Survey, alprazolam (Xanax) was added to a category of "Depressants" in 2002 and lifetime use of this category increased from 4%, 8.7%, and 8.9% among 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> graders respectively in 2001 to 5.1%, 10.3%, and 12.7% among 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> graders in 2002.

### **Exhibit 13**

